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mound at Floyd was due to the method of burial. This being evidenced by the fact that over a small portion of one of the bodies the earth had not been so thoroughly packed, and as a consequence the bones were almost entirely decomposed away, while the other portion of the body over which the soil had been very firmly packed was well preserved. Judging from all facts gathered, it seems not improbable to suppose that this represented a family burial.

The question has been raised, "How was it that these five persons were all buried here at the same time, their bodies being still in the flesh?" As we have no reason to suppose that these ancient people possessed any means for preserving, for any length of time, in the flesh, the bodies of their dead; it seems plausible to suppose that these individuals were all swept off at about the same time by some pestilence, or else, upon the death of some dignitary of the tribe or people (perhaps represented by the remains of the old man) the other members of the family were sacrificed, similar to the custom which has prevailed among some ancient tribes or races of historic times.

On the same stream, a short distance below this mound, several other mounds occur which promise to yield interesting results, and which we purpose to explore as opportunity offers.  
—CLEMENT L. WEBSTER, *Charles City, Iowa.*

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## MICROSCOPY.<sup>1</sup>

THE EGGS OF PETROMYZON.<sup>2</sup>—1. Artificially fertilized eggs were treated with Flemming's fluid, containing a larger admixture of osmic acid than is prescribed in the original formula.

2. After 30 minutes the eggs were washed in distilled water, passed through 30% and 70% alcohol (3 hours in each), and preserved in 90%.

3. The eggs were cut in paraffine, the sections fixed to the slide with albumen, stained with safranin, and mounted in xylol balsam.

<sup>1</sup> Edited by C. O. Whitman, Director of the Lake Laboratory, Milwaukee.

<sup>2</sup> A. A. Böhm, *Arch. f. Mikr. Anat.*, xxxii. pp. 634-5.

CENTRAL NERVOUS SYSTEM OF LUMBRICUS.<sup>1</sup>—If the earthworm is to be sectioned in toto, it is necessary to remove the sand from the alimentary canal. For this purpose, place the worm in a glass cylinder partly filled with fine bits of wet filter-paper. As the paper is swallowed the sand is expelled, and at the end of about two days the alimentary tract is cleansed.

In the study of the ventral cord, Friedländer employed the following methods:

Place the worm in water, to which a little chloroform has been added, and it soon becomes stupefied in an outstretched condition. Then cut open the body-wall along the median dorsal line, and pin the edges down in a dish covered with paraffine or wax. After removing the alimentary canal, the specimen may be treated with a preservative fluid.

1. *Osmic acid* 1%. After an exposure of about half an hour, the worm is sufficiently stiffened to allow the pins to be removed, and it may then be cut into pieces of any desired length. The pieces are then left twenty-four hours in the same solution, then washed, and passed through the usual grades of alcohol. Preparatory to embedding in paraffine, the pieces are saturated with chloroform or toluol. This method is excellent for the study of the neuroglia-like elements, and is the best for the brain.

2. Preparations treated thirty minutes with osmic acid (1%) are transferred to a dilute solution of pyroligneous acid (1 part to three parts water), which reduces the osmic acid very quickly. This is followed by alcohol as before. The ganglion cells are well preserved.

3. The preparation is first treated with weak alcohol, then with stronger grades. After half an hour in 70% alcohol, it is stiff enough for removing the pins, and for cutting into small pieces. Nerve fibres are somewhat contracted by this method, and are thus more easily distinguished from the surrounding connective tissue.

4. Corrosive sublimate (aqueous sol.) and 50% alcohol in equal parts (thirty minutes) gave good preparations of the nerves and the neural tubes.

For preparations according to No. 3, the best stain is a modified form of Mayer's alcohol carmine, absolute alcohol being substituted for 80%. Sublimate preparations are successfully stained with Grenacher's hæmatoxylin. After half an hour in this staining fluid, the preparations are transferred to acidu-

<sup>1</sup> Benedict Friedländer, *Zeitschr. f. wiss. Zoologie*, XLVII, 1, 1888, p. 48.

lated alcohol (50%, with a little hydrochloric acid)  $\frac{1}{2}$  minute, then placed in alcohol containing a few drops of ammonia. Connective tissue and nerves are unstained, while ganglion cells are stained deep blue.

The last two methods of staining may be followed by picric acid, which stains the uncolored elements yellow. The process is as follows:

After the sections have been fixed to the slide with collodion and the paraffine dissolved with turpentine or zylol, the slide is placed in turpentine containing a few drops of a solution of picric acid in absolute alcohol. In a few seconds, nerve-fibres, connective tissue, and muscles are stained yellow. The slide is next to be placed in turpentine containing a few drops of alcohol, to wash away the excess of picric acid, then in pure turpentine or xylol preparatory to mounting in balsam.

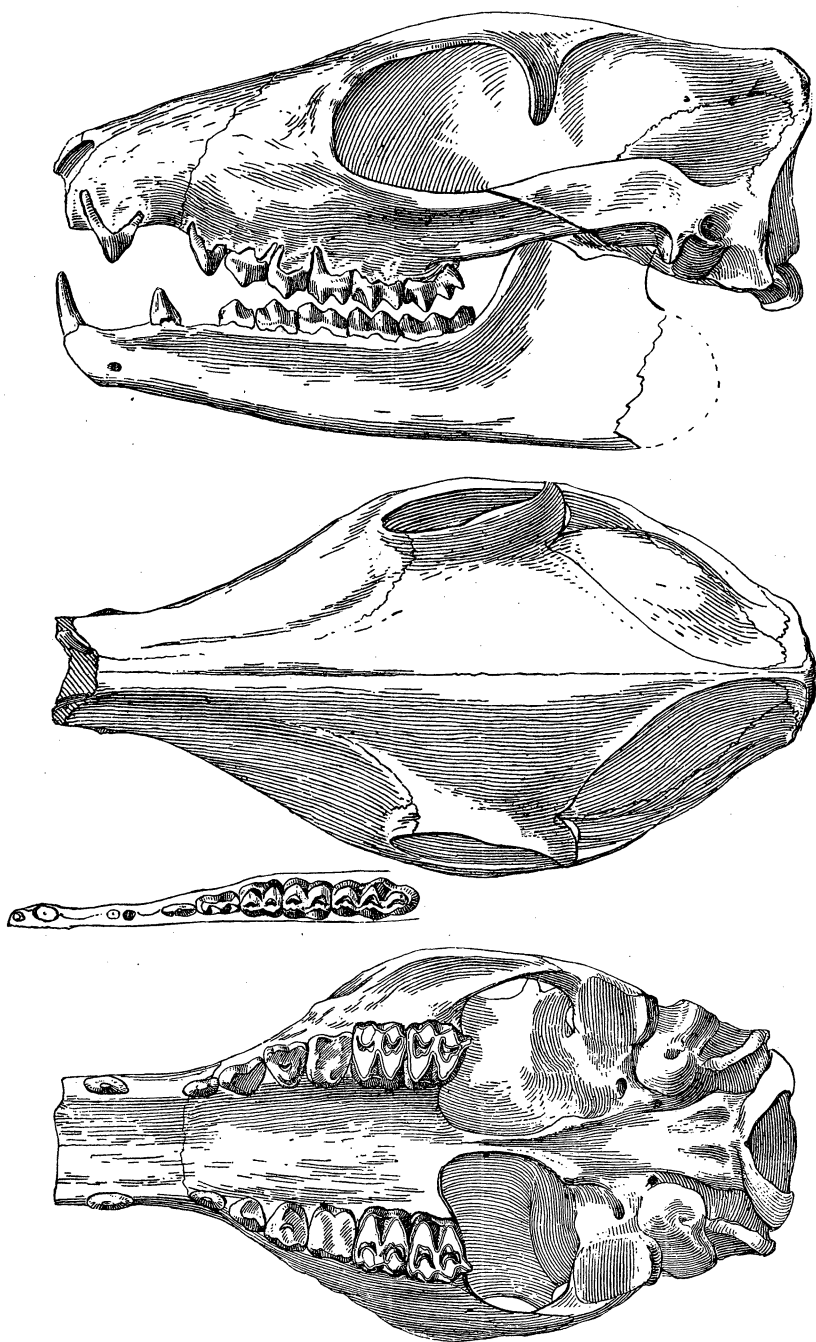
ZYLOL DAMMAR.<sup>1</sup>—M. Martinotti advocates the use of dammar dissolved in zylol as a mounting medium, to be preferred to balsam in certain cases. He prepares his solution in the following way:

Forty grams of dammar and forty grains of zylol are mixed together in a stoppered bottle and allowed to stand for three or four days at the ordinary temperature; the solution is then filtered. The filtrate, which will amount to about 70 grams, is then evaporated in a water-bath down to about 45 grams.

The object of this concentration is to obtain a solution of the resin in the smallest quantity of zylol possible, just enough in fact to merely dissolve the resin. This concentrated solution becomes yellow, but retains its limpidity. The next step is to dilute this solution with oil of turpentine, by which means the yellowish color is made to almost disappear.

<sup>1</sup> *Journal Roy. Micr. Soc.*, Feb. 1888, p. 153.

PLATE VI.



*Hypertragulus calcaratus* Cope. 1. (The pterygoid region injured).